

Attorney Docket No. 23703.01

IN THE APPLICATION
OF
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FOR A
DISPOSABLE SWAB

DISPOSABLE SWAB

BACKGROUND OF THE INVENTION

1. FIELD OF THE INVENTION

5 The present invention relates to disposable pre-moistened cleaning tools, and in particular, to a disposable pre-moistened cleaning tool particularly suited for cleaning toilet seats.

2. DESCRIPTION OF THE RELATED ART

10 Many people find using public restrooms to be problematic. No matter how diligently service personnel maintain a public restroom, it only takes one inconsiderate individual to leave the toilet seat in an unclean state. Furthermore, even if the toilet seat is freshly cleaned and sanitized, there still remains apprehension on the part of many people who use public
15 toilets due to the lack of assurance that the seat is in fact sanitary.

Some organizations will provide flushable toilet seat covers as a gesture to individuals who are apprehensive of contacting the toilet seat directly with their skin. Toilet seat covers, while providing a measure of protection, will not protect a person if the toilet seat is wet with urine or other

fluids. In such cases, most people will simply pass and look for a cleaner toilet or bathroom. However, in some cases, a person may be forced to confront such conditions and can only do his or her best to clean the seat using whatever is available prior to use.

Many devices and materials have been proposed to deal with this common dilemma. U.S. Patent No. 1,512,174, issued October 21, 1924 to Isaac, describes a toilet seat cleaning device having an absorbent (e.g., felt) pad. This device is intended to be attached to the seat and moved across the surface of the seat to absorb moisture on the seat (page 2, lines 17-30). The absorbent pad is crimped permanently by the holder (page 1, lines 89-95). This device would not meet today's standards of sanitation, since it has no means for replacing the absorbent pad or disinfecting the seat.

U.S. Patent No. 2,816,311, issued December 17, 1957 to Beck, et al., describes a disposable cleaning swab and holder therefore for cleaning toilets. The cleaning swab is configured as a bag-shaped pad positioned over an end of a handle. It is intended to be used for cleaning toilet bowls, not specifically toilet seats. The swab is designed to disintegrate in water and is therefore may be flushed after use. This device is too bulky

to be suitable for individual use in cleaning toilet seats. The pad is not pre-moistened with disinfectant, and the handle is not disposable.

U.S. Patent Nos. 3,383,158, issued May 14, 1968 to Leland;
5 3,720,976, issued March 20, 1973 to Bailey; 4,031,673, issued June 28, 1977 to Hagelberg; and 4,852,201, issued August 1, 1989 to Wundrock et al., all disclose toilet bowl swabs similar to that described in the Beck patent. The swab described by Leland includes corrugations containing powdered detergent, which
10 constitutes a cleaning solution when wetted. Bailey discloses a non-disposable, parabolic-shaped sponge that can be used with a handle extension or directly by hand. Hagelberg describes a plurality of flushable cleaning pads stacked in a receptacle that are ready to be attached to the handle by a clamping
15 mechanism. Wundrock et al. describes a flushable cleaning pad having an effervescing, foaming cleaning composition. None of these devices are particularly suited for individual cleaning of toilet seats in a public restroom.

Japanese Patent No. 11-1,700, published January 6, 1999,
20 discloses a toilet seat cleaner comprising an absorbent material impregnated with a fast-drying cleaning solution. This addresses the problem described above, but requires that the

individual's hands get wet with the cleaning solution, or else the individual, in the case where the absorbent material is not pre-moistened, must carry a cleaning solution spray can.

U.S. Patent No. 5,947,986, issued September 7, 1999 to Lewis, discloses a container for pre-moistening cotton swabs. Figs. 3 and 4 show a cotton swab with pre-moistened ends, each end wrapped in a moisture-impregnable wrapper. These swabs are too small to be suitable for cleaning an entire toilet seat.

Japanese Patent Publication 2002-45,304, published February 12, 2002, describes a disposable disinfectant wipe dispenser to be placed near toilets for cleaning toilet seats. This solution requires that the owner or operator of the public facility provide the dispensers.

None of the above inventions and patents, taken either singly or in combination, is seen to describe the instant invention as claimed. Thus, a disposable swab solving the aforementioned problems is desired.

SUMMARY OF THE INVENTION

The disposable swab of the present invention comprises a flat card having a handle portion and a lower edge, an absorbent pad disposed at the lower edge, and a moisture-impermeable

wrapper extending around and encapsulating at least the absorbent pad. The absorbent pad is pre-moistened with sanitizing fluid. The disposable swab is particularly suited for cleaning a toilet seat in a public restroom or the like, and can be disposed of after a single use.

Accordingly, it is a principal object of the invention to provide a convenient means for safely and effectively cleaning and sanitizing a toilet seat.

It is an object of the invention to provide improved elements and arrangements thereof for the purposes described which is inexpensive, dependable and fully effective in accomplishing its intended purposes.

These and other objects of the present invention will become readily apparent upon further review of the following specification and drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is an environmental, perspective view of a disposable swab according to the present invention.

Fig. 2 is a front elevation view of the disposable swab of Fig. 1.

Fig. 3 is a side elevation view of the disposable swab of Figs. 1 and 2.

Fig. 4 is a perspective view of the disposable swab of Figs. 1-3 prior to being removed from a wrapper according to one embodiment thereof.

Fig. 5 is a perspective view of the disposable swab of Figs. 1-3 prior to being removed from another wrapper according to a second embodiment thereof.

Similar reference characters denote corresponding features consistently throughout the attached drawings.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Fig. 1 shows a user 12 employing swab 10 to clean toilet seat 14. Referring to Figs. 1-3, swab 10 comprises a stiff card 20 having a handle portion 24 and a pad 30 of absorbent material disposed along lower edge 22 of card 20.

Card 20 is preferably formed from plastic or other tough, nonporous material. For example, polyethylene, polystyrene, polyvinyl chloride, or the like material with a thickness of about 0.5 mm or more is considered appropriate. Card 20 may be, e.g., 2" (5 cm) square, though the size of the swab is not a crucial aspect of the invention, except that the handle portion

24 should be comfortable to grip, easy to manipulate, and suitable for use in wiping a toilet seat.

Card 20 may be made flushable. In order to do this, the card 20 is made from a stiff material, such as layered corrugated paper, that disintegrates in water. In order to protect the material from the sanitizing fluid, which may be alcohol-based, it may be necessary to cover card 20 with a thin membrane of water-soluble plastic (not shown) prior to attaching pad 30. Alternatively, the water-soluble plastic may be disposed just between pad 30 and card 20.

Pad 30 is formed of absorbent material and is attached to card 20 by any known means. The material may be any type of absorbent material, e.g., woven or non-woven fabric, tissue paper, or sponge-like material. If of sponge-like material, it may or may not be covered with a cloth covering. Pad 30 can be fixed to lower edge 22 of card 20 using adhesive, or a mechanical connection can be provided, e.g., using clips, stitching, staples, etc.

Pad 30 is preferably provided in a pre-moistened state by sanitizing fluid. The sanitizing fluid includes an anti-bacterial and anti-viral agent and is preferably fast drying and

scented. Many suitable disinfectants are commercially available that have at least some of these properties.

In order to prevent pad 30 from drying out prior to use, each swab 10 is individually packaged in a moisture-proof wrapper. Fig. 4 shows one example of a wrapper 40 that encapsulates pad 30 and allows handle 24 to protrude therefrom. Wrapper 40 may be sealed to handle 24 by heat or adhesive. In use, wrapper 40 is torn away, exposing pre-moistened pad 30, which is then ready for cleaning.

Fig. 5 shows another packaging example in which swab 10 is completely surrounded by wrapper 45, thereby preventing the escape of moisture from pad 30. Wrapper 45 is not wrapped so tightly around swab 10 as to force fluid from pad 30, so that a majority of fluid remains within pad 30 and handle portion 24 is not significantly wet.

It is to be understood that the present invention is not limited to the embodiment described above, but encompasses any and all embodiments within the scope of the following claims.